PCT/AU2004/001579 Received 20 April 2005

IAP9 Rec'd PCT/PTO 11 MAY 2006

- 2 -

caused as a result of the build-up of leaves and other material in guttering system is that the houses or other buildings can become an extreme bushfire risk.

This therefore identifies a need to provide a system and method for being able to more effectively clean out the guttering systems of houses and other buildings, to avoid the build-up of leaves and other debris therein.

Summary of the Invention

The present invention seeks to provide a solution to the aforementioned problem, or at least an alternative to the presently known methods and systems.

In one broad form, the present invention provides an apparatus for pivotally securing a gutter to a fascia, such that it may be pivotally moved between a first (draining) position and a second (cleaning) position, said apparatus including:

a bracket adapted to be attached to said fascia, having an arm outwardly extending therefrom;

a connector adapted to be attached to said gutter;

a hinge provided at a remote end of said arm, pivotally connecting said connector to said bracket; and,

a releasable locking means, to releasably lock said gutter in said first (draining) position.

Preferably, said arm of said bracket extends outwards from said fascia to a distance which is less than the width of said gutter.

25

15

20

In one preferred form, said gutter includes an integrally formed connection means for pivotal attachment of said gutter to said hinge means on said arm.

In an alternative, but also preferred form, the apparatus includes a connection means which is adapted to be secured to said gutter and to said hinge means.

Preferably, said connection means is shaped to substantially surround and thereby support said gutter therein.

Also preferably, the extremities of said connection means are formed with deformable tabs thereon, which are adapted to be deformed to at least partially surround lips formed on the edges of said gutter's walls.

Also preferably, said apparatus is shaped to complement the profile of the gutter to which it is attached.

10

15

In a further broad form, the present invention provides a gutter adapted to be pivotally secured to a fascia such that it can be pivoted between a first (draining) position and a second (cleaning) position, said gutter including:

connector means associated with said gutter which is adapted to cooperate with a hinge, the hinge being provided at a remote end of an arm of a bracket, an outer end of which attached to a fascia,

whereby said gutter is releasably locked to said bracket in said first (draining) position.

20 Preferably, said arm of said bracket extends outwards from said fascia to a distance which is less than the width of said gutter.

In a further broad form, the present invention provides a guttering system which enables pivotal movement of a gutter component between a first (draining) position and a second (cleaning) position, said guttering system including:

a least one gutter component, including straight gutter components, corner gutter components and shaped gutter components;

connector means attached to each said gutter component;

at least one bracket, for attachment to a fascia, said bracket having an outwardly extending arm;

a hinge provided at a remote end of each said arm; and,

- 4 -

a releasable locking means, to releasably lock each said gutter component in said first (draining) position.

Preferably, each said guttering component pivots substantially upwardly and outwardly from a pivotal axis which is displaced outwards from a fascia to which said guttering system is affixed.

Also preferably, each gutter component is adapted to pivotally move relative to compatible ancillary components including, but not limited to, corner gutter components, downpipe components, etc.

Preferably, a seal is provided between said respective gutter components and/or said compatible ancillary components.

In a further broad form, the present invention provides a method of cleaning a gutter, including the steps of:

unlocking a locking means of said gutter from a first (draining) position;

pivoting said gutter to a second cleaning position, such that the gutter is disposed outwardly relative to its draining position;

removing leaves from said gutter;
returning said gutter to said draining position; and,
relocking said locking means.

In a further broad form, the present invention provides a tool for effecting movement of a gutter system between a first (draining) position and a second (cleaning) position, including a tool having a shaped end adapted to engage with said gutter, said tool being provided on an elongate handle such that said movement may be effected from a substrate surface remote from said gutter, said tool further including lock operating means to lock and/or unlock a locking means.

Preferably, the tool further includes lock operating means to lock and/or unlock a locking means.

Brief Description of the Drawings

5

10

15

- The present invention will become more fully understood from the following detailed description of preferred but non-limiting embodiments thereof, described in connection with the accompanying drawing(s), wherein:
- Fig. 1 illustrates an exploded isometric view of a preferred embodiment of the components of a guttering system in accordance with the present invention;
- Fig. 2 illustrates, in Figs. 2(a) and 2(b) thereof, two elevational views of preferred arrangements of guttering system embodiments, which operate in a similar manner;
- Fig. 3 illustrates, in Figs. 3(a), 3(b) and 3(c), plan views of how the gutter system of the present invention may alternatively be installed about a corner of a building;
- Fig. 4 illustrates an elevational view of how the guttering system of the present invention may be connected into a downpipe;
- Fig. 5 illustrates an elevational view of an alternatively preferred embodiment of the present invention;

be pivotally rotated in the direction shown by arrows 13 in Fig. 2. That is, the gutter may be pivoted upwardly and outwardly between a first, or draining, position as shown in Fig. 2, and a second, or cleaning, position wherein the gutter is typically disposed between 90° and 180°, from the first or drainage position. Once in the second or cleaning position, the gutter may be easily hosed out, or brushed out with a broom or like cleaning implement, such that any and all leaves and other debris contained within the gutter 14 may be easily removed.

Fig. 1 also illustrates the provision of a swivel lock 15, which may be attached to the gutter bracket 3 and adapted to protrude through an elongate orifice 16, such that, when in the drainage position, the swivel lock may be rotated such that the gutter bracket 3 is prevented from moving apart from the fascia bracket 2. In alternative to the lock, the gutter may be constructed such that it would normally be biased to remain in the draining position. This could be achieved with a spring or other biasing means, if necessary, but otherwise it may remain naturally in this position without the provision of a spring or other biasing means.

It will be appreciated that the method of cleaning the gutter includes a few simple steps. Firstly, the swivel lock may be rotated, permitting the gutter to be outwardly pivotally moved in the direction shown by arrows 13 in Fig. 2 from the first or draining position to the second or cleaning position. The leaves may fall or be easily removed therefrom. Once cleaned, the gutter may be returned to the draining position, and the swivel lock 15 may be relocked. It will be appreciated by persons skilled in the art that, by provision of a lock, the gutter cannot be unintentionally tilted or opened. This not only ensures correct functioning of the guttering system, but is also a safety factor.

It will be understood by persons skilled in the art that, when a single piece of guttering is required to be positioned along one edge of a roof, a relatively simple embodiment shown in Fig. 2 may be formed. However, most houses tend to have either outwards or inwards corners. Fig. 3 shows how the present invention may be easily adapted to cater for outward corners. It will be appreciated by persons skilled in the art

that inward corners may be likewise catered for. In Fig. 3, Fig. 3(a) shows how the ends of the gutter may be angled such that they slightly overlap and abut with an adjacent angled edge, such that the outward rotation 13 is still enabled. Fig. 3(b) illustrates an alternative whereby a fixed corner piece is provided into which straight edged gutters may rest and slightly overlap and may still be easily rotated as necessary between draining and cleaning positions. Fig. 3 illustrates yet an alternative, whereby the corners are extended partially along the edges of the roof line. In some situations, this arrangement may be preferable to that of Fig. 3(b). Downpipes and the like can easily be provided in the fixed corner pieces shown in Figs. 3(b) or 3(c), or, downpipes could be utilised as shown in Fig. 4, whereby the gutter may be molded such that a downpipe extension 17 fits within a downpipe 18, the downpipe extension still being able to be pivotally moved in the direction of arrow 13.

It will be appreciated that in most situations, an entirely waterproof seal need not be provided so, for example, the downpipe extension 17 can simply rest intermediate the walls of a downpipe 18. In some situations, it may be more desirable to have a more watertight seal, and it will be understood by persons skilled in the art that this can easily be achieved by the provision of an o-ring type seal or a silicon or rubber type seal between the components. Like seals may also be provided between the various guttering components and cornering components shown in Fig. 3.

20

25

15

It will be appreciated by persons skilled in the art that, when a seal is provided between respective gutter components, and when the locking means is operated to lock the respective guttering components into position, that the locking means exerts pressure to the seal(s), to facilitate compression of the seal(s), to consequently give a water tight bond between the guttering components. It will also be appreciated by persons skilled in the art that a variety of types of materials may be utilised for the seal(s), but preferably, the seal may be formed of a soft dense waterproof foam rubber or tar impregnated foam.

It will be appreciated by persons skilled in the art that the present invention therefore provides a guttering system which may be easily cleaned, such that bushfire hazard build-up of leaves is easily avoided. It will be appreciated that the guttering components of the present invention may be easily combined to form a guttering system, and that numerous variations and modifications are envisaged to the guttering system.

For example, whilst a specific arrangement of components is illustrated in Fig. 1 to illustrate a bracket, various other means for connection of brackets to the gutters, brackets to the fascias, may be embodied. For instance, the gutter bracket could be eliminated as a separate component and formed integrally with the gutter. Likewise, different arrangements of fascia brackets could be provided, whereby the bracket could outwardly extend from beneath the eaves as opposed to the fascia, or, where the brackets may be adjustable, such that the gutter apparatus may be lowered for easy access, for instance,

15

10